Risks and opportunities of climate change

THE RISK OF CLIMATE CHANGE IS A REALITY THAT REQUIRES
PREVENTIVE INITIATIVES THAT MITIGATE THEIR IMPACT:
WHAT IS THE ROLE OF THE FINANCIAL SYSTEM?

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Introduction

Climate change poses a threat to the planet. This has been widely recognized c for the 181 [1] signatory countries of the Paris Agreement (2015) and was reiterated by the last report published by the United Nations panel of experts (IPCC, for its acronym in English). In turn, environmental organizations, think tanks, foundations and academia mia have warned about the impact of climate change on economies and especially on the financial services markets, while regulators and supervisors in different countries have begun to include the issue on their agendas, inspired by the government's speech Bank of England author Mark Carney, "Breaking the Skyline Tragedy" [two] and mobilize-

two by initiatives of the Study Group on Climate Finance (GFSG, for its acronym in
English) of the G20 and the Task Force for Climate Related Financial Disclousure of the Financial Stability Board (FSB).

The Colombian financial sector has not been immune to this trend and, consequently, has come making very important efforts to integrate the concept of sustainability in the development development of your business. Specifically, a group of Colombian banks built and pro- moved, with the support of the United Nations Environment Program Finance Initiative (UNEP FI) and under the coordination of Asobancaria, a voluntary initiative called Protocol Green, which seeks that banks develop social risk management systems and channel resources towards sustainable projects and reduce the environmental footprint of their operations, which has served for entities to develop strategies with a view to sustainable development of the country.

From the Superintendencia Financiera de Colombia-SFC, Colombian supervisory authority, An initial effort was made in 2011 when the entities under surveillance were required to include the social value or social investment made during the previous year in their reports management. Many entities in Colombia took advantage of this request to turn towards the best practices in sustainability reports, aligning with international standards such as the Global Reporting Initiative (GRI) and / or those requested by the Global Compact of Nations United through their Communications on Progress (CoP). According to the GRI, the reports There were 30 registered in 2015, while in 2017 there were only four 3.

[1] United Nations climate change, Paris Agreement- status of ratification. Available at: https: // un-fccc.int/process/the-paris- agreement / status-of-ratification

[2] Breaking the Tragedy of the Horizon - climate change and financial stability. Speech given byMark Meat and. September 29, 2015.
Available at: https://www.bankofengland.co.uk/speech/2015/breaking-the-tra-gedy-of-the-horizon-climate-change-and-financial-stability

3 List of GRI reports. Available at: https://www.globalreporting.org/SiteCollectionDocuments/-GRI-Reports-List-Limited.xlsx

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Against this background, by 2018 and aware of the impact it has on the entities that authorities show their commitment to this problem, the SFC made the decision to incorporate Establish climate risk management and finance promotion in its strategic objectives green areas, for which it developed a work plan that allows alignment with the international discussion nal, strengthen the management entrusted to its missionary and strategic objectives associated with financial stability and promote alternatives to improve the capacity of sector entities to support the transition to a low-carbon economy, mobilizing capital for projects green.

This report aims to: i) Officialize the position of the Financial Superintendence of Colombia facing climate change; ii) Present the work plan of the Superintendency to the risks and opportunities derived from climate change and; iii) Report the results of the survey sent through Circular Letter of the Financial Superintendency # 67 of 2018.

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Background

the financial sector, environmental issues and climate change

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Environmental issues stopped being alien to the financial system several years ago. Various Initiatives have been gathering the expectations that stakeholders have on the role of banks on sustainable development and good practices to manage potential impacts on the environment of the activities in which they invest, finance and insure.

One of the first experiences of voluntary guidelines to integrate sustainability into the financial business were the Equator Principles. This initiative was created in 2003 with the in order to have a common frame of reference to determine, assess and manage risks environmental and social issues in all industry sectors, in four financial products: 1) Project finance advisory services, 2) Project finance, 3) Loans corporate projects related to projects and 4) Bridging loans. To date, 94 financial institutions Companies in 37 countries have adopted these principles. In 2015, the United Nations gave it a boost

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to another similar initiative when Kofi Annan invited a group of institutional investors to join to a project to develop the Principles for Responsible Investment (PRI). These Principles offer a menu of possible actions for analysts to assess risk environmental, along with other factors, such as social ones or those linked to governance, generally generally recognized by name and acronym in English (Environmental, Social and Governance, ESG) in investment practice. This initiative has also attracted a significant base of signatories tarios (2,000) representing the majority of investments under professional management in the world. According to the official records of these organizations posted on the pages web, in Colombia only one entity is a signatory of the Equator Principles (Bancolombia) and three of the PRI (Acumen, Bancolombia and Mesoamerica).

Faced with initiatives to promote the trans- appearance in environmental matters and in general sustainability, a project worth highlighting tar is the sectoral supplement for the financial sector member of the Global Reporting Initiative (GRI). The GRI is the first global standard for reporting sustainability that seeks to generate responsibility, helps identify and manage risks and facilitates relations with stakeholders. These standards have sectoral supplements, which group the set of topics or issues relevant to each sector. For services financial, the sector supplement covers topics related to consumer protection and financial education, business integration in risk management and initiatives you go to promote financial inclusion. East The supplement was developed in several stages, with the attendance of representatives from different regions tions and various types of organizations, in the which the Colombian bank BCSC Fun- Social dation.

In the last 4 years, and after the financial crisis, the discussion has focused on climate change and how it impacts the performance of economies and the stability of the financial system ro. On the one hand, the Ministers of Finance and G20 leaders formed the Study Group on Climate Finance (SGCF), known today as GFSG. This Group was initially created with the objective of "considering ways to mobilize effectively allocate resources that have in takes into account the objectives, provisions and principles of the Framework Convention of the United Nations on Climate Change (CM- NUCC) aligned with the Cancun Agreement "[5]. This group was relaunched when China assumed the Presidency of the Group in 2016, in order to

[4]Marqués Sevillano, JM and Romo González, L., "The exchange risk climate in markets and financial institutions: challenges, measures and international initiatives ". Bank of Spain. Available at: www.bde- .es / f / webbde / GAP / Sections / Publications / InformesBole- tinesMagazines / RevistaEstabilidadFinanciera / 18 / MAY / Articulo_Marque s__Romo.pdf

[5]Schneider, H., Taboulchanas, K., Scardamaglia, V. and Barragán, M. "Contributions of the G20 to combat climate change and its financing." July 2017.Available at: https://www.kas.de/c/document_library/ge- t_file? uui- d = b1600c13-b20a-c8c2-348b-69afe0793b14 & groupId = 252038

“Identify institutional and market barriers to green finance and, based on experience, countries, develop options on how to strengthen the skills of the financial system to mobilize private capital for green investments ”[6]. It was modified during the Presidency of Argentina to “encompass the broader concept of sustainability” [7].

Since its launch, the GFSG has provided significant inputs and frameworks for “growth in strong, sustainable, balanced and inclusive ”[8], one of the last being the study on practices in the financial sector for Environmental Risk Analysis (ERA). According to recognized by the G20 delegates in the Group's first year, the ERA is a “cross-cutting, important and relevant, which supports the strategic objective of the GFSG […] by allowing those responsible financial decision-makers integrate environmental data into the financial decision-making process

decisions from the perspective of risk management and asset allocation ”[9]. On the other hand, the Financial Stability Board (SFB) established in December 2015 a working group on climate-related financial information disclosure (TCFD, for its acronym in English) with the main stakeholders (banks, investors, insurance companies and issuers), to understand the impact of climate change on financial markets and the creation of guides for the identification, management and communication of climatic risks. TCFD published its recommendations in June 2017 and, to date, more than 500 companies, institutions financial institutions, regulators and governments have publicly supported the implementation of these mentions, also including emerging countries in Latin America.

[6]Schneider, H. Taboulchanas, K., Scardamaglia, V., Barragán, M. “Contributions of the G20 to the fight for change climate and its financing. " July 2017.Available at: https://www.kas.de/c/document_library/get_-file? uuibd = b1600c13-b20a-c8c2-348b-69afe079314 & groupId = 25038

[7]G20 Sustainable Study Group. Sustainable Finance Synthesis Report. July 2018.

[8]G20 Leaders Declaration, Hamburg, Germany, 7-8 July 2017.Available at: http: //unepinquiry.or-g / wp-content / uploads / 2017/07 / G20_leaders_declaration.pdf

[9]Enhancing Environmental Risk Assessment in Financial Decision-making. In support of the G20 Green Finance Study Group. July 2017.Available at: http://unepinquiry.org/wp-content/u-ploads / 2017/07 / Enhancing_Environmental_Risk_Assessment_in_Financial _Decision-making.pdf

to support the transition to a low-income economy carbon.

The first progress report already registered 18 entities members, which established and reaffirmed stated that “climate risks are a source of financial risk. Therefore, it is within the

Independently and autonomously some of the global authorities in charge of ensure the stability of prices and the system identified their possible scopes of action against climate change and sustainability in general. Some entities decided to promote green finance to through incentives for banks green loans increase and so that grow green bond issuance [10]. Other entities have "identified the need for develop alternative models that examine the economic impact of the effects of climate change, where they are considered various sectors with different characteristics of carbon emission in your activity (see Giraud et al. 2017) "[11], while the great Most have begun to "analyze in a way preliminary exposure of the financial sector to climatic risks or intensive assets in carbon; This is how the Bank of Netherlands (see DNB 2016 and 2017), the authori- Swedish supervisory authority (see Finansinspektio- nen 2016) and the Bank of England (see BoE 2015 and 2017) "[12]. This is how in December 2017, eight central banks and supervisors joined to create the Network for Greening of the Financial System (NGFS, for its acronym in English), released in Paris as One Planet Summit, to contribute to the analysis and management management of climate-related risks in the financial sector and mobilize finance

mandates of Central Banks and Supervisors guarantee the resistance / resilience of the financial system faced with these risks […] The financial risks The rivers it presents are, consequently, of the entire system and potentially irreversible if not addressed da "[13].

These efforts led the Bank of England (BoE) and later the TCFD defined the risks climate-related factors based on two factors risk res. They are currently known as risk gos derived from climate change: 1) the risks physical or those related to impacts direct consequences of climate change and 2) the risks of sition or those derived from policy changes, technologies or demographics that favor an eco- low carbon emissions nomy.

[10]NGFS First Progress Report. October 2018.Available at: https: //www.- banque-france.fr/sites/default/files/me- day / 2018/10/11/818366-ngfs-first-progress-r eport-20181011.pdf

[11]The Bank of Spain wrote in its report that "Central banks they tend to accumulate extensive experience when developing models macroeconomic studies that examine the economic impact of different events, including the effects of change climate. However, there is some consensus that traditional models nally used in central banks, as in the case of models dynamic and stochastics of general equilibrium (best known for their initials in English, DSGE), they are not the most suitable for capturing effects of climate change or the complexity of the economic transition ".

[12]Marqués Sevillano, JM and Romo González, L., "The exchange risk climate in markets and financial institutions: challenges, measures and international initiatives ". Bank of Spain. Available at: www.bde.es/- f / webbde / GAP / Sections / Publications / InformesBole- tinesMagazines / MagazineEstabilidadFinanciera / 18 / MAY / Article_Marques__Romo.pdf

[13]NGFS First Progress Report. October 2018.Available at: https: //www.- banque-france.fr/sites/default/files/- mia / 2018/10/11/818366-ngfs-first-progress-report- 20181011.pdf[14]Initially the BoE identified an additional risk factor: the liability risk or liability risk.

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Physical risks arise as a consequence of climatic and geological events and changes in the balance of ecosystems. These risks may be of a gradual nature (for example, rising sea level or desertification) or manifest abruptly (such as storms or droughts) and, in In any case, they entail physical damage to the assets of the companies, disruptions in the chain supply or increase in expenses necessary to meet them. On the other hand, the risks of sition are linked to the shift towards the transition to a low carbon economy as response to climate change. These risks arise mainly as a result of the priorities in the policies in the fight against climate change in each country, in which the reduction of emissions Greenhouse gas emissions often play an important role and, to a lesser extent, to the emergence of new technologies and new market demands. These new dynamics cas can end up affecting financial institutions, either because they impact on their own activity or because they affect assets in which they have invested.

On the impact of climate change on financial markets and more than 18 authorities of Supervision and central banks, independently and / or jointly as part of the NGFS, have manifested the urgency to act. These establish that "it is foreseeable that financial risks crystallize in some way, either through the physical or transitional channel, or a combination of both "[15] and they pointed out that" [t] he need to manage emerging mega-risks is so important as always. […] Climate change has potentially profound implications for insurers, financial stability and the economy ”[16]. However, the exact strategy action is not so clear. Assessing climate-related risks and assessing their The impact on economic and financial stability is complex due to the time mismatch between actions and impacts. In this sense, “[t] he nature of risk factors requires a approach […] prospective and with a long-term vision ”in which“ the consequences long-term, taking into account historical unprecedented risks and the possibility of a major irreversible change [in temperature] ”[17].

[15]NGFS First Progress Report. October 2018.Available at: https://www.banque-france.fr/sites/default/files / me dia / 2018/10/11/818366-ngfs-first-progress-report-20181011.pdf

[16]Breaking the Tragedy of the Horizon - climate change and financial stability. Speech given by Mark Meat and. September 29, 2015.Available at: https://www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability

NGFS First Progress Report. October 2018.Available at: https://www.banque-france.fr/sites/default/files / me dia / 2018/10/11/818366-ngfs-first-progress-report-20181011.pdf

[17] Information published on the website of the Ministry of the Environment and Sustainable Development. Available at: http://www.minambiente.gov.co/index.php/component/content/article / 460-template-climate-change-16

Impact of climate change In colombia

In Colombia, climate change has been an environmental policy priority since 1994, when The country approved the United Nations Framework Convention on Climate Change, through the issuance of Law 164, with the aim of seeking alternatives that would allow it to undertake actions to address the complex problem of climate change[18]. Since that date, the country has expressed its commitments through 200 Multilateral Environmental Agreements[19], among the which stand out for their relevance the Kyoto Protocol, the design of national policies and the implementation of strategies and concrete actions, including the Code of Natural Resources, the Law of 99 or General Environmental Law and the National Policy on Climate Change (PNCC).

In recent years this commitment has taken on greater relevance not only to be included in the national development plans since 2002, but also through the ratification of the Agreement of Paris, the establishment of the National Determined Contribution (NDC, for its acronym in English), the creation of a National Climate Change System (SISCLIMA) and the creation of a Intersectoral Commission in charge of coordinating actions on this issue. In commitments current international events, which were presented to the Secretariat of the Convention on Exchange Climate in September 2015 and incorporated into the Paris Agreement at the end of that same year, is that of the nationally determined contribution, in which the commitment is reduce 20% of greenhouse gas emissions - GHG by 2030 and, if provided sufficient international support is provided, such commitment could increase to 30% over to the projected emissions for said year [20].

In terms of adaptation, the country prioritized ten actions, which include, among others: i) 100% of the national territory nal with climate change plans formulated and in implementation, ii) a national system of indicators adaptation to climate change that allows monitoring rear and evaluate the implementation of adaptation measures tion, iii) water resource management instruments with climate variability and change considerations climate in the priority basins of the country, iv) including

sion of climate change considerations in
planning instruments and adaptation actions
innovators in six priority sectors of the economy
mine[21]. Studies carried out by the National Department

[18]IDEAM, UNDP, MADS, DNP, Chancellery. 2017. Third National Communication of Colombia to the
[19] United Nations Framework Convention on Climate Change (UNFCCC). Third Communication
National of Climate Change. IDEAM, UNDP, MADS, DNP, Chancellery, GEF.
Bogotá DC, Colombia. Available at: http://documentacion.ideam.gov.co/openbiblio/bvir-
tual / 023731 / TCNCC_COLOMBIA_CMNUCC_2017_2.pdf
[21]National climate change policy: document for decision makers --- / Murillo, Luis Gilberto.
Minister (2016 - :); [Eds.] Directorate of Climate Change: Florián Buitrago, Maritza; Pabón Restrepo,
Giovanni Andrés; Pérez Álvarez, Paulo Andrés; Rojas Laserna, Mariana; Suárez Castaño, Rodrigo. ---- Bogota,
DC: Colombia. Ministry of Environment and Sustainable Development, 2017.Available at: http: //www.andi.-
com.co/Uploads/13.%20PolCC%20toma%20decisiones.pdf

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nal of Planning (DNP) affirm the need to mobilize both public financial flows as private to investments that support give these commitments. tions of the investment required to meet only with the mitigation goal amount to COP $ 3.1 trillion annually (0.35% of the GDP of 2016) until 2030, of which 38% must come from the public sector and 62% from the sector private[22]. Faced with adaptive strategies figures are not yet available, but it is considered a priority and was included within of the NDC, insofar as the plans for adaptation translate into generation of employment, reduction of energy costs, improvement of competitiveness and protection tion of forests and their productivity [23].

Similarly, Colombia made progress in 2017 in the adoption of economic instruments with in order to strengthen the implementation of techniques to combat climate change. In the Law 1819 of 2016 (Structural Tax Reform tural) a carbon tax was included of US $ 5 per ton of CO2, which could represent approximately US $ 220 million per year a tax on plastic bags cases of up to COP $ 50 in 2020 which is assumed by buyers, and were approved tax exemptions for the sale of electric energy trica from renewable energy sources non-conventional, such as solar, wind, biomass, among others. With these taxes, the Ministry of Finance sought to strengthen

efforts made by the country in this matter and "move towards a more comprehensive tax system that includes the environment and sustain- nibility "[24]. It is important to note that only with carbon taxes, the Ministry expects provide a reduction of more than 4.3 million tons of CO2 in the next thirteen years.

Faced with the impacts of climate change, only the change in the hydrological regime in Colombia generates greater vulnerability to flooding of coastal and island areas, by the rise in sea level; increasing in the area with a high potential for desertification tion, including territories with an agricultural vocation the, and the affectation of the water resource by decrease in average annual rainfall, among others [25]. The Research Institute Marinas y Costeras (Invemar) and the Institute of

[22]DNP, "Analysis of public and private spending and institutional framework for climate change: Case of Colombia - Colombian Climate Public and Private Expenditure and Institutional Review (CPEIR) "(Bogotá: DNP - SISCLIMA Financial Management Committee). 2018. Available at: https://colaboracion.dnp.gov.co/CDT/Ambiente/Finanzas%20-del% 20Clima / Document% 20CPEIR.pdf
These figures were used as a reference in that document. Not However, the figures may vary between different studies. From According to Econometrics & CDKN (2016), it is estimated that increase investment from 2020 between 0.65% and 0.87% of the Annual GDP of Colombia, equivalent to between 9.8 and 15.8 trillion pesos per year by 2030, to meet the mitigation goals of the country by 2030.
[23]García Arbeláez, C., Barrera, X., Gómez, R. and Suárez Castaño, R. 2015. The ABC of Colombia's commitments for COP21. 2 ed. WWF-Colombia. 31 pp. Available at: http: //www.minambiente.gov.-co / images / Cambioclimatico / pdf / co-lombia_to_la_COP21 / ABC_de_los_Compromisos_de_Colombia_para_la_COP21_VF.pdf
[24] Bulletin 067 of the Ministry of Finance and Public Credit. Available at: http://www.minhacienda.gov.co/HomeMinhacienda/ShowProper-ty; hB3FWSqbwqOZ53-MzDulFfiXzKj-itH6aE97FGa3DU1q_YjT5! -878 23345? NodeId =% 2FOCS% 2FP_MHCP_WCC-079297% 2F% 2FidcPrima ryFile & revision = latestreleased
[25]Information published on the website of the Ministry of the Environment and Sustainable development. Available at: http: //www.minambiente.gov.-co / index.php / component / content / ar-ticle / 457-template-climate-change-13

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Hydrology, Meteorology and Environmental Studies of Colombia (IDEAM) forecast an increase in to about 0.9 degrees Celsius by 2040, and 2.4 degrees Celsius by the end of century in the country's temperature, and the RCP Climate Change scenarios show increases in rainfall in the Andean region between 10% and 40%, and decrease in the Caribbean region between 10% and 30%, and historical evidence indicates a significant increase in droughts, measured by the occurrence of consecutive dry days per year, in the climatic regions of the Alto Magdalena, the Sierra Nevada de Santa Marta and the Alto Cesar and the Alta Guajira[26].

The losses related to these events, both insured and uninsured, have recorded brought record figures in the last decade in Colombia. “La Niña 2010-2011 generated damages by COP $ 11.2 trillion (IDB & ECLAC 2012) ”while“ El Niño 2015-2016 affected production in COP $ 3.1 trillion or 2% of the national GDP (DNP (2017) ”[27]. For the period comprised Between June 2010 and December 2011, insurers reported the payment of claims for $ 771 billion, which only represented 7.3% of the total cost of the winter emergency of those years. However, this natural event is constituted to date in the compensation of highest amount paid by the industry in its history in the country[28]. And not just the value of losses evidence of Colombia's exposure to physical risks.

The number of lives lost also reflects the vulnerability of the country to physical risks because of the lack of adaptation measures; Swiss Re has listed two events that occurred in the country among the 20 catastrophes with the highest number of fatalities: floods caused by by La Niña (2011), [29] and the overflow of the Mocoa, Sangoyaco and Mulato rivers (2017) [30]. From In fact, the latest projections prepared by the National Government in a horizon of media-

[26]IDEAM, PNUD, MADS, DNP, Chancellery. 2017. Third National Communication of Colombia to the Framework Convention of the United Nations on Climate Change (UNFCCC). Third National Communication on Climate Change. IDEAM, UNDP, MADS, DNP, Chancellery, GEF. Bogotá DC, Colombia. Available at: http://documentacion.ideam.gov.co/openbiblio/bvir-tual / 023731 / TCNCC_COLOMBIA_CMNUCC_2017_2.pdf

[27]DNP, “Analysis of public and private spending and institutions for climate change: Case of Colombia - Colombian Climate Public and Private Expenditure and Institutional Review (CPEIR) ”(Bogotá: DNP - Management Committee SISCLIMA Financial). 2018.Available at: https://colaboracion.dnp.gov.co/CDT/Ambiente/Finanzas%20-del% 20Clima / Document% 20CPEIR.pdf

[28]report on the Social Security Value. Phasecolda. 2011.Available at: http://www.fasecolda.com/fi-les / 3913/9085/9533 / balance_2011 _-_ 27_-12.pdf

[29]Swiss Re, sigma No. 2/2012. Available at: https://www.swissre.com/dam/a cr: 0e10459b-2561-49a8-853a-1f0-deb141219 / sigm2_2012_sp.pdf

[30]Swiss Re, sigma No. 1/2018. https://www.swissre.com/dam/jcr:f7c4-db9e-dc0d-4776-b91f-b143a1275eab / sigma1_2018_es.pdf

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non-term (2030) and long-term (2050), in terms of increased hydroclimatic phenomena These extremes indicate a potential threat to business models in sectors such as transportation, energy, agriculture and livestock, manufacturing and health, among others[31]. And, although Colombia is not the largest contributor to climate change, it is one of the most vulnerable to its impacts. According to SISCLIMA “[...] Colombia is one of the countries with higher levels of catastrophic risks, with expected annual losses above USD $ 3.3 billion for multiple threats (earthquakes, floods, cyclonic winds, storm surges and tsunamis) and is one of the 20 emerging countries most prone to to floods [...] The distribution of the level of exposure shows that 36% of its territory The river has a high potential for hydrometeorological events such as floods and landslides.

[32].

The Financial Superintendency and its position on climate change

Climate change and the country's responses to it can translate into financial risks. factors that impact financial stability and, therefore, are not unrelated to the Superintendency. For one part, as already indicated, are the risks that arise as a consequence of climatic events, called physical hazards. These risks can negatively impact assets and / or increase the expenses of supervised entities due to changes in the environment. no, such as sea level rise or desertification, increase in frequency and severity of abrupt events such as storms or droughts and, in general, natural events of catastrophic order; risks that the industry today recognizes as part of its contingency plan operational within the framework of the Operational Risk Management System (SARO). For other On the other hand, the risks associated with the transition to a low-carbon economy emerge as response to climate change or transition risks, which are associated with the priorities in the policies in the fight against climate change in each country, the emergence of new technologies logies and / or changing consumer preferences.

These risk factors have implications for both financial institutions and financial and monetary authorities, and its relevance is likely to increase in the future in Colombia. As already mentioned, the country is highly vulnerable to the direct impacts of the climate change. The increase in the frequency and severity of events such as floods and waves of drought affects the efficiency of public spending as it is redirected towards infrastructure, policy social and productive for the replacement of basic public goods and services. The impacts of These events, in turn, affect the ability of households and companies to assume their responsibilities.

[31]IDEAM, PNUD, MADS, DNP, CHANCELLOR'S OFFICE. 2017. Third National Communication of Colombia to the Convention United Nations Framework on Climate Change (UNFCCC). Third Communication National of Climate Change. IDEAM, UNDP, MADS, DNP, MINISTRY OFFICE, GEF. Bogotá DC, Colombia. Available at: http://documentacion.ideam.gov.co/openbiblio/bvir-tual / 023731 / TCNCC_COLOMBIA_CMNUCC_2017_2.pdf

[32]DNP, "Analysis on public and private spending and institutions for climate change: Case of Colombia - Colombian Climate Public and Private Expenditure and Institutional Review (CPEIR) "(Bogotá: DNP - Comité de SISCLIMA Financial Management). 2018.Available at: https://colaboracion.dnp.gov.co/CDT/Ambiente/Finan-zas% 20del% 20Clima / Document% 20CPEIR.pdf

financial assets and damage the value of properties and assets you. For credit institutions to, for example, damage caused by these events not only translate into financial risks due to the materialization operational risk management, but also also due to credit and credit risks market. If the losses are not guaranteed gurated, the financial burden of these losses may fall on profitability entities and their ability to growth and mass supply financial

The country also has an agenda that includes commitments, strategies and policies, and has begun to apply economic instruments that can translate into transition risks. Measures such as tax on carbon can reduce income corporations as a result of May-

Climate change also presents opportunities for the country. These com-promises by the State in the fight against climate change have generated the need to mobilize capital towards sustainable projects. As mentioned above, only to meet the mitigation goal COP $ 3.1 trillion is required annually (0.35% of 2016 GDP) until 2030[33], of which 62% have to come from private sector. These opportunities have been identified by banks members of the Green Protocol, who have prioritized the development of financial green zas[34]in Colombia. To date, the financial sector has placed four green bonds worth COP $ 1.2 trillions and banks have introduced Green credit lines[35] available for a variety of projects that contribute to sustainable development. For the Superintendency is very important

costs and change the valuation of
companies with business models
based on the use of fossil fuels
them, due to an adjustment in demand.
These risks resulting from the transition
tion tend to materialize in the long
deadline and requires a perspective of
long-term to ensure that
Today's actions are considered in light
of future impacts, than to be bad
handled could lead to a reassessment
tion of the value of a wide range of
assets. Although the size of the impact
and the speed with which it materializes
are uncertain, it is important that
financial institutions in the country
begin to understand and include risks
gos associated with climate change
as an important factor in the development
business performance and assignment
capital.

that these opportunities be exploited
chased by the entities of the
sector responsibly and under
high standards of transparency [36].

[33]DNP, "Analysis of public and private spending and institutional framework for climate change: Case of Colombia - Colombian Climate Public and Private Expenditure and Institutional Review (CPEIR) "(Bogotá: DNP - SISCLIMA Financial Management Committee). 2018.Available at: https://colaboracion.dnp.gov.co/C-DT / Environment / Finance% 20-del% 20Clima / Document% 20CPEIR.pdf

[34]Defined by the G20 as "Financing of investments that provide environmental benefits in the broader context of sustainable development ". See Asobancaria Sustainability Report for more details. Available at: [35]https: //www.google.com/search? q = sustainability + report + a-sobancaria & rlz = 1C5CHFA_enCO831CO831 & oq = inform e + de + sustainability + asobancaria & aqs = chrome..69i57j0l 2.5377j0j4 & sourceid = chrome & ie = UTF-8

[36]It is important to note that these instruments have the potential to be used for greenwashing. Finished used to explain when a company wants to do their business practices as environmentally friendly environment when they are not actually generating jun positive impact on the environment.

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As a supervisory authority charged with promoting financial stability and inte-
quality and transparency of the securities markets and ensure the safety and soundness of
supervised entities, we must ensure that we are reasonably prepared
to assimilate the impacts of the materialization of risks and take advantage of the opportunities
des posed by climate change. The SFC, within its prospective approach, evaluates
entities not only against current issues, but also against those who may-
mind arise in the future. In this sense, it has identified climate change as a
current financial risk with exponential impact in the future if measures are not taken
timely and preventive days. Therefore, our purpose is based on i) understanding, ii)
identify ii) share practices to manage risks derived from climate change
and reduce regulatory barriers (if any), as well as having mechanisms for the
Green financial market is developed in an orderly and transparent manner. (see box
dro 1).

Box 1. Objectives of the strategy of the Financial Superintendency

The strategy of the Financial Superintendency has two
big goals:

Promote the management of the risks that the change
climate represents for the stability of the system
financial.

Support the development of derived initiatives
of the transition to a low-income economy
carbon and green growth.

Within the framework of this strategy, in August 2018 the SFC joined the Sustainable Banking Network
(SBN), to dialogue with international regulators, industry
and experts in the field of sustainable finance, in order to understand the areas in
those in which the intervention of the supervisory authorities adds more value. In October of that

same year, and with a view to identifying the perception of the supervised entities regarding the risks environmental risks, especially climate risk, and understand what are the main opportunities nities presented by the transition from the low-carbon economy, applied in the fourth quarter of 2018 a survey directed to their monitored. The main results are presented below[37].

[37] [37]Check the full results of the survey at www.superfinanciera.gov.co

For 2019, the work plan of this Superintendency will be focused on the following four axes:

1 Taxonomy:

The Superintendency considers it important to determine the need for a taxonomy for projects and financial instruments, where the actors or parties involved have Common and clear criteria for classifying projects or investments as green or sustainable. On In this sense, during 2019 the SFC will publish its position regarding the taxonomy based on the international experiences and local priorities for the definition of a classification that allow market development in an orderly and sustainable manner over time.

2 ESG:

The results of Circular Letter 67 of 2018 of the Superintendency showed that the integration tion of ESG considerations in investment decision-making processes are still inci- peppers. However, more and more professional investors and resource managers are taking these aspects into account within their risk mitigation strategies, not only applying it to specific assets or funds but in a transversal way in their policies. On that sense, and seeking greater protection for resources managed by supervisory entities In 2019, the Superintendency will seek the adoption of ESG criteria by investors. professional tass.

3 Transparency (Climate risk):

According to the TCFD, there is currently an asymmetry of information on the risks associated with linked to climate change to be used as an input in decision-making. Is information asymmetry limits the ability of investors to identify opportunities that provides protection against physical and transitional risks derived from climate change. Taking into account that in Colombia there was a significant reduction in the publication of sustainability reports under international standards by the financial sector, the SFC will focus during 2019 on: i) supporting the TCFD and other international and local initiatives that allow the construction of greater transparency and the reduction of information asymmetries tion in relation to climate change ii) begin to lay the foundations to facilitate the use of information climate control for risk identification by sector entities.

4 Transversal -Articulation and capacity building:

The Financial Superintendency considers that environmental matters should start from a collective construction, where the will and commitment of the financial sector it is key to developing a more sustainable financial system. Within the framework of this work, the SFC i) will continue to participate in international discussions through networks such as SBN and will seek entry to the NGFS, making it the second supervisory authority in the region to enter the network ii) will facilitate the creation of spaces and platforms that allow the construction of joint action with the financial sector, coordination with interest groups and other entities of the State, as well as the development of capacities of all the actors involved.

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Survey Results: Current status of the Colombian financial sector's response to change climate (See infographics)

1 Establishments Banking	13 Companies insurance general	14 Company of sure of lifetime	2. 3 Societies administrators Of funds pension and unemployment	5 Societies fiduciaries
Banking	Bbva Seguros Colombia	Bbva Life Insurance Colombia SA	AFP Porvenir	alliance
Agrarian Bank of Colombia	Berkley International Insurance Colombia	Bmi Colombia Insurance company From Vida SA	Old Mutual Pensions And Cesantías SA	Fiduciary Bancolombia SA Society Fiduciary
AV Villas Bank	Chubb Insurance Colombia	Colmena Seguros SA	Protection SA	BNP Paribas Securities Services Society Fiduciaria SA
social housing Bank	Coface Colombia Seguros De Credito SA	Insurance company By Vid Aurora SA		BTG Pactual Society Fiduciaria SA
Bank Share	World Company Of Insurance SA	Global Insurance Life SA		Credicorp Capital Fiduciaria SA
Cooperative Bank Coopcentral	HDI Insurance	Hdi Insurance		Trust Bogota
Davivienda Bank.	Jmalucelli Travelers Insurance SA	La Equidad Seguros Oc		Central Trust
Bank of Bogota	La Previsora SA Insurance company	Mapfre Insurance		Fiduciary Hive
Bank of Commerce Exterior of Colombia SA Bancódex	Mapfre Insurance	Old Mutual Insurance Life SA		Fiduciary Colombian From Commerce Exterior SA - Fiducoldex SA
Western Bank	National Insurance	Pan American Life From Colombia		Fiduciary Corficolombiana
Falabella Bank	QBE Seguros SA	Positive Company Of Insurance		Fiduciary Davivienda SA
Finandina Bank	SBS Seguros SA	Bolivar Insurance		TRUSTEE OF OCCIDENTE S .A.
Banco GNB Sudameris	Segurexpo De Colombia Sa Insurer Of Credit And Commerce Oexterior	Alfa Life Insurance SA		Fiduciary Popular SA
Banco Multibank SA	Seguros Alfa SA	Life Insurance State SA		Fiducoomeva
World Bank Woman SA	Commercial Insurance Bolivar	South American		Trust Management SA
popular Bank	Seguros Del Estado SA			Itaú Asset Management Colombia SA Society Fiduciary

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Establishments banking

53%

12% fifty% 2. 3%

Report the performance of the environmental policy a board

Consider the environmental issues like a chance

Consider the matters environmental like financial risks

He reported having identified opportunities associated with climate change

Reputational

30%

69%

Of Transition

42%

19%

2. 3%

Of the systems or tools while contemplating specifics physically the change climate

Developed a system of risk management by reasons related to social responsibility or corporate

Physical

% of establishments that have performed some kind of analysis about the following risks

26

Banking establishments answered the survey (includes 2 development banks)

7%

Consider that climate change represents a financial risk material for all your business

57%

It has an environmental policy that covers credit operations

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Insurance companies General

10%

58%

twenty-one%

It has environmental policy for investments

It does not count with environmental policy

It has a policy environmental for subscription of insurance

Reported having identified opportunities associated

nsition

e tra
D

utational
ep
R

19

General insurance companies responded to the survey

twenty-one%

52% 10% twenty-one%

Physical

% of companies that have carried out some kind of analysis on following risks

It has a system or management tool from

26%

has limited coverage or increased do value of premiums as a result catastrophic events for modeled risk

42%

develops management systems environmental risk due to CSR

100%

of companies that have a management system or tool environmental risks says that these they contemplate climate change

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Administrators of Pension funds

Only 1

AFP considers climate change as a material financial risk to your deal

100%

considers climate change brings opportunities

3

managed companies

pensions and layoffs aunts answered the survey

0% Physical

0% Of Transition

33% Reputational

% of AFPs that have been carried out some kind of analysis on following risks

2/3

they have politics supervised by the Board of Directors or steering Committee

2/3

they are evaluating if environmental issues represent a risk

66%

plans to develop systems of risk management by financial reasons reputations

None

AFP has a system or tools for
environmental risk management

Conclusions

In the coming decades, climate change will transform the economy in a structural way. Different central banks, supervisory authorities and international entities have recognized this as acid and are reviewing how the risk factors associated with climate change, both physical risks such as those resulting from the transition to a low carbon economy, will result in risks and whether these risks constitute a threat to the soundness of the institutions and the stability of the the financial system.

Evidence has shown that Colombia is no stranger to the impacts of climate change. The impacts physical coughs derived from increases in the frequency and severity of hydroclimatic events, such as for example damage to property and infrastructure, disruption of value chains and diminished productivity, among others, have generated significant financial costs for institutions financial Similarly, the actions of the National Plan for Adaptation to Climate Change and the measures that the country is taking to comply with the commitments assumed in the Agreement of Paris present, on the one hand, financial risks in the long term through the loss of value of assets associated with the use of fossil fuels and, on the other, opportunities arising from new business models, technologies and sectors in the context of a transition of the economy.

There are several factors that explain this situation, but probably the lack of information due to part of the companies, the lack of a common taxonomy to classify what is considered green and / or the lack of experience in models that quantify climate risks and opportunities are the main.

To support the development of a more sustainable financial system from an environmental perspective, the Superintendency developed a work plan made up of four fronts that will allow it to strengthen close the sector's initiatives in the face of physical risks, work together with the entities of the system financial management to better understand how to manage transition risks and facilitate development responsible and orderly of green finance.

Despite the advances made by banks within the framework of the Green Protocol, the system The financial institution has still strategically integrated the risks associated with climate change:

- With the exception of banking establishments, most insurance companies general (63%) and life (53%), pension fund management companies (66%) and trust companies (60%), the boards or management committees have not considered the environmental matters within the framework of its functions.
- With the exception of general insurance companies (42%) and banking establishments caries (50%), most life insurance companies (66%), management companies pension fund companies (66%) and trust companies (73%) have not identified financial risks derived from the impacts of climate change.
- None of the pension fund management companies has developed a environmental risk management system. All reported exploring the possibility to develop it at the time of completing the survey. Only one of the respondents reported have some kind of tool to manage these risks.
- The main reason for developing an environmental risk management system, by banking establishments (69%), general insurance companies (42%) and life (46%), pension fund management companies (66%) and companies des fiduciaries (43%) is Social Responsibility.

Most of the pension fund managers (100%) and, to a lesser extent, of banking establishments (53%) have identified opportunities derived from climate change co. Most life and general insurance companies and trust companies they have not identified opportunities.

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